

**CLAIMS:**

1. A mixer circuit arrangement for frequency-translating a voltage input signal by an amount dependent on the frequency of a local oscillator signal to provide an output signal, comprising an input stage and a mixer stage, the input stage being arranged to convert the voltage input signal into differential current signals and the mixer stage being arranged to mix the differential current signals with the local oscillator signal to provide the output signal, characterised by means for injecting a compensation current into the input stage so as to balance the differential current signals provided to the mixer stage.
2. A circuit according to claim 1, the means for injecting a compensation current into the input stage comprising means for injecting the compensation current into a voltage input of the input stage, the voltage input being one of a pair of differential inputs for receiving said voltage input signal.
3. A circuit according to claim 1, the means for injecting a compensation current into the input stage comprising a memory for storing a predetermined compensation current value, and means for generating a compensation current corresponding to that value.
4. A circuit according to claim 3, the value being stored as a digital value, and the means comprising a digital to analogue converter for converting the digital value into a corresponding analogue current.
5. A circuit according to claim 4, said means comprising a digitally controlled switch for selecting the voltage input of the input stage to which the compensation current is to be applied.
6. A circuit according to claim 1, the means for injecting a compensation current into the input stage comprising a resistor bridge coupling input voltages to the voltage inputs of the input stage, the compensation current being injected into the input stage via the resistor bridge.

7. A method of reducing local oscillator breakthrough in a mixer circuit arrangement for frequency-translating a voltage input signal by an amount dependent on the frequency of a local oscillator signal to provide an output signal, the mixer circuit comprising an input stage and a mixer stage, the input stage being arranged to convert the voltage input signal into differential current signals and the mixer stage being arranged to mix the differential current signals with the local oscillator signal to provide the output signal, the method comprising injecting a compensation current into the input stage so as to balance the differential current signals provided to the mixer stage.